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THE TEACHING OF MATERIA MEDICA¹

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It might seem superfluous to even mention the necessity of including materia medica in the curriculum of the training school before an audience of this kind, yet only a year ago a very prominent physician, in addressing the graduating class of one of the largest training schools in this city, deplored the fact that the nurse of today was departing from her primary function of nursing the sick and was gradually entering the domain of scientific medicine. This, he thought was indicated by the inclusion in the training school course of such subjects as anatomy, physiology, materia medica, bacteriology, chemistry, etc.

Although the keynote of good nursing must always be to make the patient comfortable, the nurse's function should not end merely with such simple duties as bed making, the arrangement of the patient's pillows, or supporting his head while being fed. The modern nurse is expected to be a trained observer as well as a gentle attendant; so that she may be able to recognize changes in the condition of the patient, the occurrence of new symptoms and the ordinary, untoward or poisonous effects of drugs. To perform these duties intelligently requires a basic knowledge of such so-called theoretical subjects as anatomy, physiology, chemistry, materia medica, bacteriology, hygiene, etc. In fact, the nurse may even be able to make her patient more comfortable when she is well grounded in these fundamental technical subjects.

Personally, I believe materia medica to be the most important subject in the entire nursing course. There is no part of a nurse's work that is so fraught with danger as the handling of drugs. An error in the administration of a medicine, or even forgetting to look carefully at the label of a bottle, are mistakes on the nurse's part that may be fatal to the patient.

THE NURSE'S FUNCTION IN REGARD TO DRUGS

Having established the need of studying materia medica, the question arises, how much materia medica should the nurse know, and what are her functions in regard to drugs? The nurse should never prescribe any remedies, nor should she on her own responsibility ever treat any disease. These duties belong distinctly to the province of the physician.

¹ Address delivered before the New York City League of Nursing Education, November 3, 1915.

The administration of medicine, the preparation of their doses, the modification of their taste, and the care of drugs, as well as the keen, watchful observance of their effects, comprise a distinct specialty of materia medica which belongs essentially to the art of nursing. In teaching materia medica, then, emphasis should be laid upon the following points: (1) The administration of medicines; (2) The care of remedies; (3) The observation of the pharmacological effects; (4) The observation of the poisonous symptoms.

PRELIMINARY PREPARATION OF PUPILS

All good teaching should aim to build up new knowledge on the basis of what the pupil already knows. A new subject should therefore be taught in terms of the known. How much preliminary knowledge should we assume as the basis for the teaching of materia medica? For practical purposes, we may divide the preliminary preparation of pupils who enter training schools into two categories: the apparent and the real preparation. By the apparent preparation, I mean the amount of educational work the pupil is supposed to have covered according to her entrance certificate as filed with the State Board of Regents. In this state one year of high school work or its equivalent is required of pupils entering a training school for nurses. The amount of study represented by such a high school course varies in different schools and communities. As a general rule, however, a first year high school course comprises a study of English, elementary algebra, a choice of Latin or a modern language, and elementary biology. In most cases the student has not as yet taken up the study of chemistry, botany or physics. By the real preparation, I mean the knowledge the pupil has actually absorbed from her studies, plus the general educational effect of such studies and the natural receptivity of her mind. These are factors, however, which are not capable of measurement. For practical purposes, therefore, the average educational equipment as represented by one year of high school work should form the basis for the training of the nurse in materia medica as well as in all the other subjects in the nursing course. Since, however, a first year high school course presupposes a thorough knowledge of arithmetic, we should expect our pupils to be especially well grounded in that subject.

The preliminary education of many of our pupils has consisted of more than one year of high school attendance. Many of them are high school graduates while others are even college graduates. These greater educational advantages do not always coincide with a more receptive type of mind, though as a general rule more educational training tends to increase the facility with which the mind assimilates new knowl-

edge. The increasing number of highly educated women who are constantly entering the nursing profession is being viewed with keen pleasure and satisfaction by those of us who have the interests of nursing education at heart. Such women tend to elevate the standards of the profession and to place it in the front rank of the community where it justly belongs.

REQUISITES OF THE TEACHER

The necessity for a good preliminary education on the part of the pupil nurse, suggests its corollary; the need of efficient teachers. Because of its very nature, *materia medica* is one of the most difficult subjects to teach properly. An exceptional pedagogic ability is therefore essential on the part of the instructor. In discussing the requirements of the instructor, however, I am cognizant of the fact that the superintendent of the training school, as well as the training school committees of many of our hospitals, frequently cannot act with a degree of freedom necessary to obtain efficient teachers. Their action in this, as in other regards, is often limited by extenuating circumstances such as the size of the budget, the traditions of the institution, etc.

It has always been a mooted question in nursing educational circles, as to the relative value of a physician or a nurse as a teacher in training schools. With particular force does this problem apply to the instructor of *materia medica*. For very evident reasons it is difficult for me to express an unbiased opinion on this phase of the subject; for equally evident reasons it would be impossible for any member in this audience to express such an opinion. As a general rule, however, I believe the physician to be better equipped for teaching *materia medica* than the nurse. The physician usually has a more detailed knowledge of the subject than the nurse and is more capable of handling the practical problems in the use and effects of drugs as they occur on patients. His weakness, however, as far as equipment goes, lies in a rather limited knowledge of those refinements in the administration and care of drugs which the highly trained intelligent nurse knows so well, even intuitively. Then, too, many physicians in presenting *materia medica* to nurses fail to place themselves on a plane with their pupils, with the result that the subject assumes a technical atmosphere and thus loses its interest from the standpoint of the nurse. The nurse's weakness on the other hand, lies in a rather limited knowledge of the subject matter. What is even more important than a thorough knowledge of the subject matter, be the teacher doctor or nurse, is good pedagogic ability.

To my mind there is no reason why the nurse is not capable of being a good teacher of *materia medica*, provided she has supplemented her

training with a more special training in materia medica, physiology, and chemistry, as well as in the science and art of teaching. The materia medica course as given in most training schools is not a sufficiently good preparation for teaching the subject. Needless to say the instructor should receive a salary commensurate with the work done and the time spent, for only in this way can proper standards of efficiency be maintained. The method in vogue today in many institutions of assigning the teaching of the nurse to a few inexperienced physicians or to an already overburdened superintendent or assistant is to be deplored. I believe the time is past when the training school is to be considered merely as a building for housing the "ward help." The modern training school should be considered in the same category with other educational institutions. Equally high standards of efficiency as regards pedagogic ability and knowledge of the subject matter should prevail among the faculty.

THE PLACE OF MATERIA MEDICA IN THE CURRICULUM

I believe it is now generally agreed that the three year course is the ultimate course in training schools. I cannot see how it is possible to include a study of all those subjects essential to the proper training of nurses in a course of less than three years. Where in the course does the study of materia medica properly belong? Materia medica is a subject that is intimately interwoven with the nurse's practical work. The logical time, then, is to study the subject during the second year. This is the time in her course when the nurse is being trained in her practical work. It is during this time that she is nursing patients, observing their symptoms and administering their medicines.

The study of anatomy, physiology and chemistry form such an essential basis for the study of materia medica that these subjects may be justly considered its prerequisites. We may consider them as theoretical subjects which have no direct bearing upon the nurse's practical work. Their logical place in the course is during the first year of training because at this time the pupils perform very little practical work that requires any degree of technical study or preparation. A knowledge of chemistry, however, is so essential to a proper understanding of materia medica, medicine and nursing subjects in general, that I believe it would be better to ultimately make elementary chemistry a preliminary requirement of every prospective pupil nurse. A course in applied chemistry however, should be given during the first year of training. This should consist largely of such principles of inorganic, organic and physical chemistry as have a bearing on nursing.

(To be continued)